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MINUTES FROM 15 MARCH 2000 RESTORATION ADVISORY BOARD MEETING NTC ORLANDO FL

3/15/2000

NAVFAC SOUTHERN

Meeting Summary
Restoration Advisory Board
Naval Training Center (NTC), Orlando
March 15, 2000

A meeting of the NTC, Orlando Restoration Advisory Board (RAB) was held on March 15, 2000, in the City Commission Chambers, Winter Park City Hall. Attached to this meeting summary are:

Attachment A:	Meeting Agenda
Attachment B:	RAB Member Sign-in Sheet
Attachment C:	2000 RAB Attendance Record
Attachment D:	IRP Program Investigation Summary
Attachment E:	Community Mailing List Notice
Attachment F:	Community Sign-in Sheet

RAB members present at the meeting were:

Hank Beers
Penelope Felger
David Grabka
Wayne Hansel
Phillip A. Jaffe
Bruce Hossfield
Bob Mackey
Nancy Maloney
Thomas C. Nelson
Blanche Parrott Olson
Nancy Rodriguez

Other support personnel present at the meeting included:

Vickie Stitt, Tetra Tech NUS, Inc.

Welcome

Wayne Hansel, Co-Chairman of NTC RAB, opened the meeting at 7:10. He welcomed the RAB members and asked if anyone had any corrections to be made to the minutes or attendance for the last meeting. Blanche Olson stated that her name had been omitted from the list of RAB members present at the last meeting. Pending that correction, the meeting minutes from the January meeting were ratified.

Kay Yeuell was excused from the meeting.

Tom Yost has resigned from the board.

Three members of the public were present:

Mark Scarbeau, Florida Design Professionals
Merrill Ladika, City of Winter Park
Tom Shutts

There were no comments or questions from the public attendees.

Questionnaires were sent out to all RAB members asking the following questions:

I want to remain an active RAB member.
I would like to resign my position on the RAB.
I would like to continue meeting every other month.
I would like to meet Quarterly.
I would like to meet every 6 months.
I would like to change our meeting location.
I would like to change meeting time.
I think the Charter needs changing.
What special topics would you like to have?

All questionnaires were returned from members except Ms. Geraldine Wojeck and Mr. Edwin Granberry, Jr.

A majority of respondents agreed that they would like to change the frequency of the RAB board meeting from every other month to quarterly. A motion was made, seconded and approved.

Blanche Olson suggested that new members be found to replace those that do not come to the meetings regularly and several members agreed. It was decided that Wayne Hansel would personally call members who do not regularly attend to inquire if they intend on attending future meetings and if not, would they voluntarily resign and make their seat available for a new member. Robert Mackey suggested that the charter be changed to lower the number of members. As an alternative to Mr. Mackey's suggestion, Hank Beers made a motion to lower the requirements for a quorum to 50% of the active membership. This was seconded and the motion carried.

The January meeting minutes were disputed when Bruce Hossfield said that he did not remember making the statement that "The city may not want to purchase it (Study Area 18) because its cost could exceed its value". Bruce Hossfield made a motion to correct that sentence by replacing "the city" with "the GOAA". It was seconded but not approved by a majority of the RAB members. The sentence will stand.

No further old business was discussed.

Wayne Hansel asked if there was any new business.

Phillip Jaffe thanked Wayne Hansel and Bruce Hossfield for attending a neighborhood meeting held to answer questions and address concerns of the people residing at Lake Druid. New residents in particular needed to be brought up-to-date and rumors addressed concerning current activities near their residences.

Blanche Olson suggested that the presentation start by 8:00 PM so that the discussion period would not become too lengthy. Everyone agreed to be more conscious of the length of the discussion period.

Wayne Hansel reviewed and summarized the BRAC update titled *UST UPDATE AND STATUS, March 2000,* and *IRP UPDATE AND STATUS, March 2000.* A copy of the document is attached.

Special Topic

BRAC Business Plan
Presented by Ms. Barbara Nwokike

Ms. Nwokike gave a brief review of the BRAC Business Plan. Copies of overheads are attached.

Co-Chair Wayne Hansel adjourned the meeting at 8:52.

ATTACHMENT A

AGENDA

NTC, Orlando Restoration Advisory Board Meeting
March 15, 2000, 7:00 p.m.

Welcome/Opening Comments	Navy Co-Chair Mr. Wayne Hansel
RAB Administration And New Business	RAB Co-Chairs
BRAC Update	Wayne Hansel, BRAC Environmental Coordinator

Special Topic: **BRAC Business Plan**

Feedback on November meeting: — RAB Members

- Main Base Redevelopment

Close RAB Business

Community Comments and Questions

Notes:

Environmental Meeting - Public Invited

Restoration Advisory Board
Naval Training Center, Orlando

The Naval Training Center's Restoration Advisory Board (RAB) will hold its regular meeting concerning ongoing environmental studies and cleanup at NTC.

When: **7:00 - 9:00 P.M.**
Wednesday, March 15, 2000

Where: **Winter Park City Hall**
City Commission Chamber - second floor
401 Park Avenue South, Winter Park

The current status of all NTC environmental program sites will be presented. The special topic will be "BRAC Business Plan". An open floor period for community comments or questions will follow the RAB business portion of the meeting.

Documents on the environmental program at NTC, Orlando, including summaries of prior RAB meetings, are available for public review at the Orange County Library, 101 East Central Avenue, Orlando. They are located in the Information Repository in the Social Sciences Department (Aisle 27) on the second floor.

Need More Information?

Call Mr. Wayne Hansel at 895-6714

or

Penny Felger at 657-8276

ATTACHMENT B

NAVAL TRAINING CENTER, ORLANDO
RESTORATION ADVISORY BOARD MEETING
WINTER PARK CITY HALL COMMISSION CHAMBER MARCH 15, 2000

COMMUNITY SIGN-IN SHEET (please PRINT clearly)

NAME	ADDRESS (please include zip code)	TELEPHONE NO. (day/evening)	AFFILIATION (if any)	Would you like to be added to our mailing list?
MARK SCARBEAU	821 CABOT CT, WINTER PARK 32792	407.263.7886	FLORIDA DESIGN PROFESSIONALS	YES
MERRILL LADIKA	401 PARK AVE SO. WINTER PARK, FL	599-3470	City of Winter Park	yes
Tom Shutts	2010 Brandywine Drive W. P.	645-2127		Yes

ATTACHMENT C

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Attachment C - 2000 RAB Attendance

RAB Member Name	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
H. Beers-Community			X									
P. Felger-Community	X		X									
D. Fuller-Community												
E. Granberry-Community												
W. Hansel-U.S. Navy, Southern Division	X		X									
B. Hossfield-City of Orlando	X		X									
P. Jaffe-Community	Exc.		X									
R. Mackey-Community	X		X									
N. Maloney-Community	X		X									
D. Grabka-FL Dept. of Env. Protection	X		X									
T. Nelson-Community	Exc.		X									
B. Olson-Community	X		X									
N. Rodriguez-U.S. Env. Protection Agency	X		X									
Ann Williams-Community	X											
G. Wojeck-Community												
K. Yeuell-Community	Exc.		Exc.									
X = attended meeting exc. = excused absence												

ATTACHMENT D

Installation Restoration Program Non-UST/AST Investigation Summary*

Base Realignment and Closure, Naval Training Center, Orlando

Site Screening SAs/Operable Units for Main Base (MB), McCoy Annex (MA), Area "C" (AC), and Herndon Annex (HA)

SA	Location	BRAC Color Code	Building Number	Name	Reason for Investigation	Current Status
3	MB	4/Dk Grn	73/2816 2817	RTC 1st Lt. Storage/ Office/Shops	Hazardous materials are stored on the property and are regularly transferred to and from Building 2817 Former USAF Tactical Air Command operations involving Matador missile testing and personnel training	PCE (tetrachloroethene) detections of 9 µg/l and 12 µg/l (versus FL MCL of 3 µg/l) were detected in groundwater samples. OPT approved a groundwater use restriction near wells OLD-03-01 and -04 and groundwater monitoring for one year or until MCLs were achieved. Site was approved for monitoring only 8/97. Sampling of well OLD-03-04 was discontinued 12/98 as PCE had fallen below the FL MCL for 2 consecutive months. ***The last two sampling rounds (2/99 and 10/99) showed that PCE had decreased to <3.0 µg/l in the other wells. The 10/99 samples had 2.2 µg/l in OLD-03-01 and 1.6 µg/l in new well OLD-03-05. OPT approved site for NFA 12/99.***
35	MB	7/Gray 7/Gray	2078 2079	Auto Maintenance Facility Auto Maintenance Facility Storage	Soil staining associated with drum storage area Unlabelled drum and unknown storage practices concerning the hazardous materials at the facility	Field work began 6/97 and included a soil gas survey. Groundwater sampled 10/97. Further delineation and groundwater screening required due to high TRPH (up to 84,000 mg/kg) in several surface soil samples including 35S01401. Arsenic in surface soil samples at 9 of 16 locations at concentrations ranging from 1.1 to 6 mg/kg vs. background screening concentration of 1.0 mg/kg. 4 microwells were installed wk of 3/2/98. No exceedances detected in groundwater. Navy conducted soil removal to address TRPH exceedances in soil samples 5/99. A fact sheet has been prepared for the public. The soil removal completion report was received 8/19/99, and the site screening report was issued 11/4/99. ***Additional sampling will be conducted to determine whether or not more soil cleanup is required to meet FL screening criteria.***
36	MB	7/Gray 7/Gray	2121 2122	PW Lumber Storage PW Shops	Soil staining from an oil spill, drum storage area Suspect past and present storage and disposal of paints and solvents, solvents, and questionable oil collection practices	Field work began 6/97 and included a soil gas survey. Groundwater sampled 10/97, resulting in TCE detection of 19 µg/l in well OLD-36-06. 5 additional wells installed and sampled 6/98 to characterize TCE plume. TCE detected at 250 µg/l in well OLD-36-09 (screened 35 ft bls). 3 more monitoring wells were installed, including 2 deep wells to top of Hawthorn. No chlorinated solvents were detected in samples from the deep wells. A (draft) site screening report summarizing investigation activities was issued 4/99 recommending soil removals and additional groundwater evaluation. ***TtNUS made recommendations in 12/99 for additional soil and groundwater sampling. The fieldwork is scheduled for 2/00.***
39[5]	MB	6/Red	4060 4067 15109 UNF-10	Loading Platform (Bldg. 137) Loading Platform (Bldg. 137) Irrigation Well Open Area (west of Nuclear Power School)	Potential landfilling in this area Potential landfilling in this area In close proximity to the old coal storage area, out-of-service well onsite Unknown nature of coal staging area, west side of property allegedly used as a landfill	Initial site screening studies completed 4/96, followed by supplemental soil and groundwater studies. Lab results indicate exceedances in surface soil for benzo(a)pyrene and arsenic. Groundwater had exceedances for PCE. Groundwater recommendations include a groundwater use restriction for surficial aquifer, completion of a risk assessment, and continued monitoring of selected wells. Probabilistic risk assessment results were presented to OPT 1/98 and indicated less than 10^{-6} risk. The future reuse of property has recently changed to nonresidential, so soil now meets State criteria. Final site screening report was approved 4/99. Fieldwork to further evaluate PCE groundwater plume began 7/99 and was completed *10/99. Of 28 samples collected, 13 contained PCE concentrations above the GCTL of 3 µg/l with a maximum of 94 µg/l.*

*Changes for this revision are bolded and italicized

See notes, glossary, and BRAC color codes at end of table

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Installation Restoration Program Non-UST/AST Investigation Summary*

Base Realignment and Closure, Naval Training Center, Orlando

Site Screening SAs/Operable Units for Main Base (MB), McCoy Annex (MA), Area "C" (AC), and Herndon Annex (HA)

SA	Location	BRAC Color Code	Building Number	Name	Reason for Investigation	Current Status
40[5]	MB	7/Gray	21022	Softball Field	In close proximity to the bottle landfill (UNF-6) to the south, may be additional landfilling activities here.	Site screening studies were completed 4/96. Lab results indicate minor exceedances in surface soil from benzo(a)pyrene (200J mg/kg) and arsenic (1.1 mg/kg); groundwater had minor exceedances for gross beta (31.8 pCi/l). Additional field studies to characterize PAHs/arsenic in surface soils took place between 12/96 and 9/97. A fact sheet was prepared for the public. IRA soil removal activities were completed 5/99. The soil removal completion report was received 8/19/99. *The site screening report was issued 11/4/99 and is being reviewed.*
		7/Gray	21023	Softball Field	In close proximity to the bottle landfill (UNF-6) to the southwest, may be additional landfilling activities here.	
		7/Gray	UNF-6	Bottle Landfill	Landfill with unknown contents.	
OU 1[3]	MB	3/Lt Grn	21	RTC Fitness Trail	Potential impact from North Grinder Landfill (contents of landfill not well documented).	The remedial investigation report concluded: (1) PAH contamination in surface soil does not pose unacceptable risks; (2) elevated gross alpha/gross beta in several wells adjacent to landfill are due to naturally-occurring radionuclides which have been mobilized by altered groundwater chemistry near and under the landfill; (3) a landfill cap will not be required; (4) groundwater should be monitored in downgradient wells to determine if there are any changes in contaminant concentrations as a function of time. The final RI report was submitted on 12/19/96. The final proposed plan was submitted 6/97, and a public meeting was held on 5/22/97. The Final ROD was submitted 6/30/97 and signed by the Navy 7/29/97.
		3/Lt Grn	4004	North Grinder (paved)		
		3/Lt Grn	4005	North Grinder (grass)		
		3/Lt Grn	4021	South Grinder (paved)		
		3/Lt Grn	4022	South Grinder (grass)		
OU 3	MB	5/Yellow	2134	Greenskeeper Storage	Confirmed arsenic in surface soils. An interim remedial action (IRA) took place in 9/97, resulting in 50 tons of soil being excavated and backfilled with clean soil.	Soil samples had elevated levels of arsenic (up to 577 mg/kg) vs a background screening level of 1 mg/kg. Groundwater had elevated levels of arsenic (up to 425 µg/l vs. 50 µg/l MCL). A PRE was conducted indicating no ecological risk, but human health risk was higher than $1x10^{-6}$. The Greenskeeper Storage Area, along with SA 9, has been designated OU 3. RI Fieldwork began 10/97 and was completed 3/98. The RI report was completed 7/98 and the FS report was completed 12/98. FDEP and EPA RI and FS comments have been received, HLA responses have been submitted, approved and incorporated. The Final RI/FS report was submitted June 1999. Groundwater samples were collected 3/99 and 8/99 and additional soil removal actions were completed 4/99. The removal actions will reduce the risk posed by soil contamination, as well as reduce the source of groundwater contamination. Groundwater results suggest that contamination has been significantly reduced since 1997. No Further Action is anticipated for soils, and long-term monitoring of groundwater is recommended. The Proposed Plan for OU3 was issued 7/1/99. The public comment period on the Proposed Plan was from 7/1/99 to 8/1/99. The draft ROD *was issued 10/18/99. Comments have been issued by FDEP and EPA and the ROD is being revised.*
OU 3	MB	5/Yellow	UNF-14	Former Pesticide and herbicide Storage	Pesticide and herbicide releases may have occurred during operation of facility. An interim remedial action (IRA took place in 9/97, resulting in 3,000 tons of soil being excavated and backfilled with clean soil.	Chlordane up to 2900 mg/kg vs. screening value of 490 mg/kg. A PRE was conducted indicating no ecological risk, but human health risk was higher than $1x10^{-6}$. The site, along with the Greenskeeper Storage Area (SA 8), has been designated OU 3. See preceding summary (Greenskeeper Storage)

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16	MA	1/White	7168	Maintenance Yard	Potential release from an oil-water separator	Field work for Group III Sites took place from 3/13/95 to 6/5/95. The (draft) Group III report was submitted to the Navy 12/15/95. There were significant detections of PAHs in four surface soil samples which slightly exceeded SCGs for some PAH compounds. Mineral spirits were present as free product in a well adjacent to an oil-water separator in the northern corner of the site. Oil-water separator transferred to NTC TMP 10/96. Surface and subsurface soil samples were collected from 13 locations, and sediment samples from 5 locations in accordance with PAH workplan. Surface soil and sediment samples were collected from the ditches on the north and west perimeters of the site 8/99. Analytical results *indicate minor exceedances of screening criteria in several samples, with one sample also exceeding nonresidential criteria.* ***These results were summarized in a letter dated 11/16/99, recommending surface soil remediation at 4 locations, and ditch maintenance with confirmation sampling.***
		2/Blue	7171	Army Motor Transportation	Potential releases of petroleum releases from motor pool operations	
		1/White	7172	Army Battery Shop	Stained soil associated with used battery storage, possible release of sulfuric acid from inside	
17	MA	7/Gray	7178	Training Material Storage	Evidence of paint dumped down the drains of adjacent wash rack.	Screening studies for SA 17 indicate: Surface soils had exceedances of several PAHs in several samples. Chlorinated solvents in groundwater exceeding MCLs. Groundwater studies indicate at least two source areas for chlorinated solvents and a plume measuring 200 feet wide by 400 feet long extending to the Hawthorn Group at 60 feet bls in the source areas and approximately 30 feet bls throughout the remainder of plume. The final site screening report was approved 4/99. An IRA soil removal was completed 5/99, and studies to further evaluate the chlorinated solvent plume in groundwater are in the planning stages.
		7/Gray	7191	DPDO Warehouse	Ground staining and paint dumping evident	
		7/Gray	7193	Army Maintenance Office	Hazardous waste drum storage and alleged burial	
		6/Red	7190	Army Motor pool and drum storage area adjacent to 7190	Site used as a motor pool and vehicle storage compound.	
18	MA	7/Gray	7182	Housing Office	hazardous materials including paint, solvents, compressed gases and petroleum products stored there	Analytical results for SA 18 indicate surface soil detections of PAHs at one location exceeded Florida SCTLs. In addition, chlorinated solvents were detected in a monitoring well associated with a tank removal. DET completed soil removal activities 5/99. Groundwater was resampled 5/99. Chlorinated solvents were not detected > GCTLs. Iron and aluminum, however, were > GCTLs. The soil removal completion report was received 8/19/99, and the site screening report was submitted in final form to the OPT for their review on 8/26/99. *Secondary standards exceedances are holding up regulatory approval for no further action*
52	MA	5/Yellow	Former Building 7261	Former Entomology Lab	Potential pesticide contamination due to past use of building.	Site screening investigations were completed 5/96, confirming soil and groundwater samples with pesticides above screening levels. IRA (soil removal) completed 9/97 with 1,300 tons of soil excavated and backfilled with clean soil. Three monitoring wells were installed after the IRA. The well at the location of the most contaminated soil has dieldrin above the MCL. OPT recommended groundwater restriction and quarterly groundwater monitoring. ***The recent sampling data (7/99 and 10/99) indicate dieldrin exceedances of 0.027 to 0.081 µg/l vs. the Florida GCTL of 0.005 µg/l.*** Final report, recommending continued groundwater monitoring and institutional controls, was approved by FDEP 5/99. Draft Decision Document was issued 8/99 ***with a revised draft to be issued 1/00.*** The Color Code will be changed to 4/Dk Grn upon incorporation of GW monitoring program into a decision document.

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54	MA	5/Yellow		Background surface soil sample locations	PAHs in surface soil above the Florida SCGs were detected in surface soil during the background sampling investigation	Additional sampling and analysis with immunoassay (IA) following the background investigation confirmed the widespread presence of PAHs at sample locations ORS009 and ORS016. The final SA 54 report was submitted 8/99 and approved by FDEP. A work plan to identify the extent of PAH contamination has been prepared by Tetra Tech. Field work *took place in 9/99, confirming PAH contamination. PAHs along the road near sample ORS009 are attributed to the road and vehicular traffic; PAHs at sample ORS016 are being further delineated.*
OU 2	MA	6/Red 6/Red 6/Red 6/Red	7355 7354 7353 7356	McCoy Annex Golf Course Greenskeepers Storage Golf Course Club House Lawn Equipment Storage	OU 2 is a 99-acre landfill operated by the Air Force from 1960 until 1972 when the Navy took over the property. The Navy closed the landfill in 1978. A 9-hole golf course was constructed over the site, which is drained by a series of canals and retention ponds that discharge to Boggy Creek and Boggy Creek Swamp to the south. It is estimated that over 1,000,000 cubic yards of waste were disposed in the landfill, and that the waste included paints and other solvents, asbestos, transformers, hospital wastes, low-level radiological waste, scrap metal, demolition debris, and yard waste.	Tetra Tech NUS performed the first phase of RI fieldwork 5/97 to 11/97. This work consisted of geophysical surveys; a soil gas survey; sampling of surface soil, surface water, and sediment; groundwater screening with DPT; and cone penetrometer testing to evaluate aquifer stratigraphy. Additional fieldwork began 2/98 with additional geophysics to define the western landfill boundary. Piezometers and stream gauges were installed 3/98 to 4/98 to determine flow directions of groundwater and the connection with ponds, canals, and ditches. A DPT program was performed to delineate groundwater contamination, and subsequently monitoring wells were installed and groundwater sampled and analyzed. Groundwater was found at four locations around the landfill boundary to be contaminated with chlorinated solvents and fuel components. Soil over the landfill had exceedances of benzo(a)pyrene and arsenic. All of the media (surface soil, sediments, surface water, and groundwater) had radiological exceedances (gross alpha/gross beta) but the rad sources may be naturally-occurring. The Draft RI report was issued for review 1/99 and comments from FDEP (4/99) and EPA (5/99) have been received and responses submitted. Resampling of selected MWs and surface water/sediment locations began 6/99 and was completed 9/99. *The draft final RI report, incorporating comments and the resampling data, is scheduled for issue 2/00*

2	HA	1/White 4/Dk Grn	6001	Septic Tank/Leachfield. Herndon landfill(s)	Exact contents of septic tank and drain field unknown (see "Other Areas" notes below for Herndon Annex Landfill) Potential contamination from unknown landfilled materials.	Field screening of the deep wells installed east of Building 606 and south of Building 610 indicate benzene concentrations of 21 and 32 µg/l, possibly related to former landfills at Herndon Annex. Additional field investigations indicate a probable off site benzene source. This land parcel was leased to the City of Orlando 12/96. Sampling of surface water in Lake Barton indicate PCE at concentrations below surface water standards. Offsite screening east of the parcel to determine the extent of benzene plume was completed 12/97. Two confirmation monitoring well clusters were installed 12/97. One deep well at intersection of Nancy Lee Ave. and Bobby St. detected benzene at 53 µg/l. Other confirmation wells in the two clusters did not have contaminants at concentrations of concern. HLA installed two additional wells to further evaluate the benzene plume. HLA final report (5/99) recommends groundwater use advisory to residents in affected area, an evaluation of remedial options, quarterly monitoring of selected wells, and transfer of parcel to Tank Management Program. Report was approved by FDEP and USEPA 6/99. Quarterly sampling began 7/99 and results showed a 15-50% decrease in benzene. *The Focused Feasibility Report and Natural Attenuation Monitoring Workplan were issued as final documents on 11/17/99. A revised draft Decision Document was issued 1/00.*

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OU 4	AC	5/Yellow	1063 and 1061	DRMO Warehouses and salvage yard, Laundry Drycleaners, Disposal Salvage Scrap Building	Former hazardous waste handling and storage area, spills are suspected and a former production well is on-site.	SAs 12, 13 and 14 have been grouped together and designated as OU 4 Soil and groundwater have elevated levels of PCE, TCE, and cis-DCE Antimony has also been detected in groundwater at elevated concentrations. The highest contaminant concentration in soil was PCE at 430 µg/kg vs. an SCG of 30 µg/kg. The highest concentrations in groundwater were PCE at 28,000 µg/l and TCE at 15,000 µg/l vs. MCLs for both compounds of 3 µg/l. Most of the highest VOC concentrations were found beneath the laundry building. Antimony was also detected in several wells at concentrations up to 16 µg/l vs. a Florida MCL of 6 µg/l. The extent of groundwater contamination was established during the OU 4 remedial investigation. A focused investigation was conducted along the lakeshore to determine the source of VOC contamination in the lake. Another investigation was conducted beneath the laundry building to identify potential contamination source areas. Construction of two recirculating wells to mitigate the lake contamination began 11/10/97. These wells are part of an interim remedial action (IRA) while the RI and FS are completed. The IRA is an in-well stripping system that will intercept the contaminated groundwater before it reaches the lake and strip out the VOCs. The two recirculating wells are operational and a monitoring plan is in place. Groundwater quality discharging to Lake Druid has improved dramatically, particularly in the area due west of the IRA where VOC concentrations were the highest. As of the last sampling event in 1/99, FDEP surface water standards had been achieved in groundwater at this location. However, because of continued operational difficulties, the IRA has not yet achieved surface water standards along the entire portion of the lakeshore targeted by this remedial system. The Navy and its contractors continue to work to improve the performance of the IRA. The RI fieldwork began late 10/97, and was completed in 4/98. RI data will be used to characterize the nature and extent of contamination throughout the entire site, in areas identified during the initial screening. These results are being evaluated and will be used to select the best remedial technology. The draft RI report was issued in September 1998. The response to regulator comments to the draft OU4 RI was issued on May 8, 1999. Additional regulator comments were received in June and September 1999. These issues have been resolved, and the RI is expected to be issued Final within the next two months. The draft OU 4 Feasibility Study (FS) was issued in January 1999. This document evaluated various alternatives for remediation of the entire Operable Unit. Regulator comments to the draft FS have been received, and the Navy is in the process of responding to these comments. The FS will be finalized when the potassium permanganate costs can be updated, expected to be approximately 3 months after startup of the treatability study (see below). The Navy continues to plan for a treatability study to evaluate in situ chemical oxidation using potassium permanganate as a remediation technology for the VOC source area. The work plan for the study was issued on 9/7/99. The state of Florida has granted permission for the

						injection of the potassium permanganate. Minor regulator comments have been received and are being addressed. Planning continues to procure the necessary equipment to inject the chemical. Over 20,000 pounds of potassium permanganate have been delivered to OU4; the drums are stored inside Building 1100. ***Installation of all monitoring wells and the extraction/reinjection well pairs was completed the week of 11/29/99. Baseline sampling for VOCs and natural attenuation parameters occurred in Dec 99. The study is scheduled to start in January '00.***

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NOTES

[1] Subject to change based on evolving evidence or knowledge.
[2] This area is in the southern portion of the Main Base golf course, near the small arms ammunition bunkers.
[3] This area also includes Building 208, the USS Bluejacket. The primary responsibility for this facility, however, lies within the UST program.
[4] Upon installation of additional monitoring wells and analysis of groundwater, a decision will be made regarding additional investigator requirements at this landfill.
[5] Sites discovered and/or reported in "Technical Memorandum, U.S. Air Force Records Search, September 1995" (HLA), and which will be investigated in accordance with work plan entitled "Site Screening Plan, Air Force Sites, Addendum 2," November 1995.
[6] Sites previously considered, but which will be investigated in accordance with work plan entitled "Site Screening Plan, Groups I through V SAs and Miscellaneous Additional Sites," Addendum 1, October 1995.

Regulatory Limits and Guidelines for Analytical Parameters:
- Groundwater - Maximum Contamination Limits (MCL), Federal and State promulgated
- Surface Water - FDEP Surface Water Quality Criteria (SWQC) Classes I through IV
- Soils - Risk Based Concentrations (RBC) from EPA Region III, Target Action Levels from FDEP (Screening guidelines only)
- Sediments - FDEP Sediment Quality Guidelines (SQG)
  - No Observable Effects Level (NOEL)
  - Probable Effects Level (PEL)
  - (Screening Guidelines Only)

GLOSSARY

AST = aboveground storage tank
BEHP = bis(2-ethylhexyl)phthalate
BTEX = benzene, toluene, ethylbenzene, and xylenes
DCE = dichloroethene
DDE = dichlorodiphenyldichloroethene
DPT = direct-push technology
EOD = explosive ordnance disposal
FS = feasibility study
FSDWS = Florida secondary drinking water standard
GCTL = (Florida) groundwater cleanup target level
GOAA = Greater Orlando Aviation Authority
HLA = Harding Lawson Associates, Inc. (Formerly ABB Environmental Services, Inc.)
IRA = interim remedial action
J = estimated
MCL = maximum contaminant level
mg/kg = milligrams per kilogram (parts per million)
Mn = manganese
Na = sodium
ND = not detected
NFA = no further action
OPT = Orlando Partnering Team
OU = operable unit
PAH = polynuclear aromatic hydrocarbon
PCE = perchloroethylene, or tetrachloroethene
pCi/l = picocuries per liter
PEL = probable effects level
PRE = preliminary risk evaluation
RAD = radiological parameter
RCRA = Resource Conservation and Recovery Act
RI = remedial investigation
SCTL = (Florida) soil cleanup target level
TCE = trichloroethene
TCLP = toxicity characteristic leachate procedure
TMP = tank management plan
TRPH = total recoverable petroleum hydrocarbons
TSS = total suspended solids
µg/kg = micrograms per kilogram (parts per billion)
µg/l = micrograms per liter (parts per billion)
UST = underground storage tank
UXO = unexploded ordnance

BRAC COLOR CODES

1/White. Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas)
2/Blue. Areas where only release or disposal of petroleum products has occurred (but no release, disposal or migration from adjacent areas has occurred)
3/Lt Grn. Areas where release and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action
4/Dk Grn. Areas where release and/or migration of hazardous substances has occurred, and all remedial actions necessary to protect human health and the environment have been taken
5/Yellow. Areas where release and/or migration of hazardous substances has occurred, removal and/or remedial actions are under way, but all required response actions have not yet been taken
6/Red. Areas where release, disposal and/or migration of hazardous substances has occurred, but required response actions have not yet been implemented
7/Gray. Areas that have not been evaluated or require additional evaluation

*Changes for this revision are bolded and italicized
See notes, glossary, and BRAC color codes at end of table
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ATTACHMENT E

Environmental Meeting - Public Invited

Restoration Advisory Board
Naval Training Center, Orlando

The Naval Training Center's Restoration Advisory Board (RAB) will hold its regular meeting concerning ongoing environmental studies and cleanup at NTC.

When: **7:00 - 9:00 P.M.**
Wednesday, March 15, 2000

Where: **Winter Park City Hall**
City Commission Chamber - second floor
401 Park Avenue South, Winter Park

The current status of all NTC environmental program sites will be presented. The special topic will be "BRAC Business Plan". An open floor period for community comments or questions will follow the RAB business portion of the meeting.

Documents on the environmental program at NTC, Orlando, including summaries of prior RAB meetings, are available for public review at the Orange County Library, 101 East Central Avenue, Orlando. They are located in the Information Repository in the Social Sciences Department (Aisle 27) on the second floor.

Need More Information?

Call Mr. Wayne Hansel at 895-6714

or

Penny Felger at 657-8276

ATTACHMENT F

NAVAL TRAINING CENTER, ORLANDO
RESTORATION ADVISORY BOARD MEETING
WINTER PARK CITY HALL COMMISSION CHAMBER MARCH 15, 2000

COMMUNITY SIGN-IN SHEET (please PRINT clearly)

NAME	ADDRESS (please include zip code)	TELEPHONE NO. (day/evening)	AFFILIATION (if any)	Would you like to be added to our mailing list?
MARK SCARBEAU	821 CABOT CT, WINTER PARK 32792	407.263.7886	FLORIDA DESIGN PROFESSIONALS	YES
MERRILL LADIKA	401 PARK AVE SO. WINTER PARK, FL	599-3470	City of Winter Park	yes
Tom Shutts	2010 Brandywine Drive W. P.	645-2227		Yes